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DATE: Monday, June 20, 2005

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	<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L9	l1 and development\$	42
<input type="checkbox"/>	L8	l1 and embryo\$	41
<input type="checkbox"/>	L7	l1 and 304	29
<input type="checkbox"/>	L6	l1 and lysine 304	0
<input type="checkbox"/>	L5	l1 and pickle	2
<input type="checkbox"/>	L4	l1 and zinc finger	33
<input type="checkbox"/>	L3	l1 and zinc	34
<input type="checkbox"/>	L2	L1 and (pkl or chd)	6
<input type="checkbox"/>	L1	chromo and helicase and dna binding	43

END OF SEARCH HISTORY

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data from INPADOC  
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NEWS 9 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY  
NEWS 10 MAR 22 PATDPASPC - New patent database available  
NEWS 11 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags  
NEWS 12 APR 04 EPFULL enhanced with additional patent information and new  
fields  
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NEWS 15 APR 25 Patent searching, including current-awareness alerts (SDIs),  
based on application date in CA/CAPLUS and USPATFULL/USPAT2  
may be affected by a change in filing date for U.S.  
applications.  
NEWS 16 APR 28 Improved searching of U.S. Patent Classifications for  
U.S. patent records in CA/CAPLUS  
NEWS 17 MAY 23 GBFULL enhanced with patent drawing images  
NEWS 18 MAY 23 REGISTRY has been enhanced with source information from  
CHEMCATS  
NEWS 19 JUN 06 STN Patent Forums to be held in June 2005  
NEWS 20 JUN 06 The Analysis Edition of STN Express with Discover!  
(Version 8.0 for Windows) now available  
NEWS 21 JUN 13 RUSSIAPAT: New full-text patent database on STN  
NEWS 22 JUN 13 FRFULL enhanced with patent drawing images  
NEWS 23 JUN 20 MEDICONF to be removed from STN  
  
NEWS EXPRESS JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005  
  
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FILE 'HOME' ENTERED AT 17:34:50 ON 20 JUN 2005

=> file agricola caplus biosis

COST IN U.S. DOLLARS

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TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'AGRICOLA' ENTERED AT 17:35:02 ON 20 JUN 2005

FILE 'CAPLUS' ENTERED AT 17:35:02 ON 20 JUN 2005

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FILE 'BIOSIS' ENTERED AT 17:35:02 ON 20 JUN 2005

Copyright (c) 2005 The Thomson Corporation

=> s pk1 or pickle

L1 3185 PKL OR PICKLE

=> s l1 and chromo and helicase and dna binding

L2 1 L1 AND CHROMO AND HELICASE AND DNA BINDING

=> d ti

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

TI PKL protein and gene from Arabidopsis and their use for  
regulating developmental identity

=> d so

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

SO PCT Int. Appl., 87 pp.

CODEN: PIXXD2

=> d pi

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI WO 2001014519 A2 20010301 WO 2000-US22725 20000818

WO 2001014519 A3 20010830

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,  
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,  
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,  
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2000067861 A5 20010319 AU 2000-67861 20000818

=> s chd

L3 9570 CHD

=> s l3 and chromo and helicase and dna binding

L4 29 L3 AND CHROMO AND HELICASE AND DNA BINDING

=>

=> dup rem l4

PROCESSING COMPLETED FOR L4

L5 21 DUP REM L4 (8 DUPLICATES REMOVED)

=> d 1-10 ti

- L5 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
TI The **CHD** remodeling factor Hrp1 stimulates CENP-A loading to centromeres
- L5 ANSWER 2 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
TI A novel method for Canada goose harvest derivation using genetic analysis of tail feathers.
- L5 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
TI Characterization of a new family of proteins that interact with the C-terminal region of the chromatin-remodeling factor **CHD**-3
- L5 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Sequence of plant protein **CHD** and uses in transformation of plant to induce somatic embryogenesis and apomixis
- L5 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2  
TI Molecular sexing of monomorphic endangered Ara birds
- L5 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3  
TI Loss of restriction site DdeI, used for avian molecular sexing, in *Oreophasis derbianus*
- L5 ANSWER 7 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
TI A comparison of flow cytometry and the polymerase chain reaction as sexing techniques for the Wood Thrush.
- L5 ANSWER 8 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
TI Sex identification of pin-tailed manakins (*Ilicura militaris*: Pipridae) using the polymerase chain reaction and its application to behavioral studies.
- L5 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Phylogenetic relationships and ancestral areas of the bustards (Gruiformes: Otidae), inferred from mitochondrial DNA and nuclear intron sequences
- L5 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Protein and cDNA sequences of human **CHD**-like protein 18.81 and therapeutical uses

=> d ab

- L5 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Centromeres of fission yeast are arranged with a central core DNA sequence flanked by repeated sequences. The centromere-associated histone H3 variant Cnp1 (SpCENP-A) binds exclusively to central core DNA, while the heterochromatin proteins and cohesins bind the surrounding outer repeats. **CHD (chromo-helicase/ATPase DNA binding)** chromatin remodeling factors were recently shown to affect chromatin assembly in vitro. Here, we report that the **CHD** protein Hrp1 plays a key role at fission yeast centromeres. The *hrp1Δ* mutant disrupts silencing of the outer repeats and central core regions of the centromere and displays chromosome segregation defects characteristic for dysfunction of both regions. Importantly, Hrp1 is required to maintain high levels of Cnp1 and low levels of histone H3 and H4 acetylation at the central core region. Hrp1 interacts directly with the centromere in early S-phase when centromeres are replicated, suggesting that Hrp1 plays a direct role in chromatin assembly during DNA replication.

=> d so

L5 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
S0 Nucleic Acids Research (2005), 33(9), 2868-2879  
CODEN: NARHAD; ISSN: 0305-1048

=> d 3 ab

L5 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
AB The two human proteins Ki-1/57 and CGI-55 have highly similar amino acid sequences but their functions are unknown. We analyzed them by yeast two-hybrid screens and found that they interact with the C-terminal region of the human chromatin-remodeling factor **CHD-3 (chromo-helicase-DNA-binding domain protein-3)**. The interaction of CGI-55 and **CHD-3** could be confirmed in vitro and in vivo by co-immunopptns. from Sf9 insect cells. Mapping showed that CGI-55 interacts with **CHD-3** via two regions at its N- and C-terminals. The CGI-55 and Ki-1/57 mRNAs show highest expression in muscle, colon and kidney. A CGI55-GFP fusion protein was localized in the cytoplasm, nucleus and perinuclear regions of HeLa cells. These data suggest the possibility that CGI-55 and Ki-1/57 might be involved in nuclear functions like the remodeling of chromatin.

=> d 3 so

L5 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
S0 FEBS Letters (2003), 533(1-3), 14-20  
CODEN: FEBLAL; ISSN: 0014-5793

=> d 4 ab

L5 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
AB The invention provides isolated nucleic acids and their encoded proteins **CHD (chromo-helicase-DNA-binding)** that act as cell transcription inhibitors and methods fo use thereof. The invention further provides expression cassettes, transformed host cells, transgenic plants and plant parts. The invention relates to methods of induction of somatic embryogenesis and apomixis by transformation of protein **CHD** into plant. The invention relates to use of protein **CHD** to improve the regeneration capacity of maize inbreds and wheat tissue.

=> d 4 pi

L5 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002046443	A2	20020613	WO 2001-US46326	20011204
WO 2002046443	A3	20030828		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR			
CA 2430800	AA	20020613	CA 2001-2430800	20011204
AU 2002025890	A5	20020618	AU 2002-25890	20011204
EP 1356064	A2	20031029	EP 2001-995339	20011204
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			

=> d 10 ab

L5 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The invention provides the protein and cDNA sequences of a novel human **CHD(chromo-helicase-DNA binding)** protein)-like protein 18.81 with the mol. weight of 19 kilodaltons cloned from human fetal brain. In particular, the invention discloses that the gene encoding this protein has a similar gene expression pattern with that of human **CHD** gene. The invention also relates to construction of **CHD**-like protein 18.81 expression vector for preparation of recombinant protein using prokaryotes or eukaryotes. The invention relates to preparation of antibody against this protein. The invention further relates to the PCR primers, nucleic acid probes, DNA fragments and protein agonists or antagonists specific for this gene or gene product for the diagnosis as well as treatment of various diseases, such as malignant tumors, blood disease, HIV infection, immune disorders or inflammations.

=> d 10 pi

L5	ANSWER 10 OF 21	CAPLUS	COPYRIGHT 2005 ACS on STN		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	CN 1324842	A	20011205	CN 2000-115810	20000524

=> d 11-21 ti

L5 ANSWER 11 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 TI A comparison of five methods for assignment of sex in the takahe (Aves: Porphyrio mantelli).

L5 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4  
 TI Rooting a phylogeny with homologous genes on opposite sex chromosomes (gametologs): a case study using avian **CHD**

L5 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Molecular sexing of individual kakapo, Strigops habroptilus Aves, from feces

L5 ANSWER 14 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 TI Molecular vs. phenotypic sexing in Red Knots.

L5 ANSWER 15 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 TI No evidence for adjustment of sex allocation in relation to paternal ornamentation and paternity in barn swallows.

L5 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5  
 TI A DNA test to sex most birds

L5 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Purification and characterization of Hrp 1, a homolog of mouse **CHD** 1, from the fission yeast Schizosaccharomyces pombe

L5 ANSWER 18 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 TI Sex detection in birds.

L5 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6  
 TI Characterization of the **CHD** family of proteins

L5 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7  
 TI A CHD1 gene is Z chromosome linked in the chicken Gallus domesticus

L5 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8  
 TI First gene on the avian W chromosome (**CHD**) provides a tag for

=> d 17 ab

L5 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Hrp1, of Schizosaccharomyces pombe, is a new member of the SWI2/SNF2 protein family that contains a chromodomain and a **DNA binding** domain as well as ATPase/7 **helicase** domains. This configuration suggests that Hrp1 could be a homolog of mouse CHD1, which is thought to function in altering the chromatin structure to facilitate gene expression. To understand the enzymic nature of Hrp1, we purified the 6-Histidine-tagged Hrp1 protein (6 + His-Hrp1) to homogeneity from a S. pombe Hrp1-overexpressing strain and then examined its biochem. properties. We demonstrate that the purified 6 + His-Hrp1 protein exhibited a **DNA-binding** activity with a moderate preference to the (A+T)-rich tract in double-stranded DNA via a minor groove interaction. However, we failed to detect any intrinsic **DNA helicase** activity from the purified Hrp1 like other SWI2/SNF2 proteins. These observations suggest that the **DNA binding** activities of Hrp1 may be involved in the remodeling of the chromatin structure with DNA-dependent ATPase. We propose that Hrp1 may function in heterochromatins as other proteins with a **chromo** - or ATPase/**helicase** domain and play an important role in the determination of chromatin architecture.

=> d 17 so

L5 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
S0 Korean Journal of Biological Sciences (1998), 2(4), 539-543  
CODEN: KJBSFZ; ISSN: 1226-5071

=> d 17 au

L5 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN  
AU Jin, Yong Hwan; Yoo, Eung Jae; Jang, Yeun Kyu; Kim, Seung Hae; Lee, Chee-Gun; Seong, Rho Hyun; Hong, Seung Hwan; Park, Sang Dai

=> d 19 ab

L5 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6  
AB The murine gene CHD1 (MmCHD1) was previously isolated in a search for proteins that bound a DNA promoter element. The presence of **chromo** (chromatin organization modifier) domains and an SNF2-related **helicase**/ATPase domain led to speculation that this gene regulated chromatin structure or gene transcription. This study describes the cloning and characterization of three novel human genes related to MmCHD1. Examination of sequence databases produced several more related genes, most of which were not known to be similar to MmCHD1, yielding a total of 12 highly conserved **CHD** genes from organisms as diverse as yeast and mammals. The major region of sequence variation is in the C-terminal part of the protein, a region with **DNA-binding** activity in MmCHD1. Targeted deletion of ScCHD1, the sole Saccharomyces cerevisiae **CHD** gene, was performed with deletion strains being less sensitive than wild type to the cytotoxic effect of 6-azauracil. This finding suggested that enhanced transcriptional arrest at RNA polymerase II pause sites due to 6-azauracil-induced nucleotide pool depletion was reduced in the deletion strain and that ScCHD1 inhibited transcription. This observation, along with the known roles of other proteins with **chromo** or SNF2-related **helicase** /ATPase domains, suggests that alteration of gene expression by **CHD** genes might occur by modifications of chromatin structure, with altered access of the transcriptional apparatus to its chromosomal DNA template.

=> d 19 so

L5 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6  
S0 Proceedings of the National Academy of Sciences of the United States of  
America (1997), 94(21), 11472-11477  
CODEN: PNASA6; ISSN: 0027-8424

=> d 19 au

L5 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6  
AU Woodage, Trevor; Basrai, Munira A.; Baxevanis, Andreas D.; Hieter, Philip;  
Collins, Francis S.

=> d 20 ab

L5 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7  
AB **Chromo-helicase-DNA binding 1**  
(CHD1) is a conserved protein with a putative role in chromatin  
architecture. Single homologs have been found in mouse, Drosophila and  
yeast. In birds the situation is different as they possess two  
homologues. One is known to be W-linked; we show the second, closely  
related gene is linked to the Z sex chromosome. The basic structure of  
the Z-linked gene is similar to the homologous genes, however, it does  
possess an addnl., internal 88 amino acid hydrophilic domain, rich in  
glutamic acid and lysine. Studies on pairs of genes sex-linked in mammals  
suggests rapid divergence of DNA sequence and function. We suggest the  
DNA sequences of **CHD-W** and **CHD-Z** do not follow this  
pattern.

=> d 20 au

L5 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7  
AU Griffiths, Richard; Korn, Richard M.

=> d 20 so

L5 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7  
S0 Gene (1997), 197(1/2), 225-229  
CODEN: GENED6; ISSN: 0378-1119

=> d 21 ab

L5 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8  
AB The avian W chromosome shares many features with the mammalian Y  
chromosome: it is small, mostly heterochromatic, and filled with large  
repetitive arrays. No gene has so far been assigned to the W chromosome  
in any bird species and, as a practical consequence, a general tag for  
avian gender identification on the mol. level is lacking. Here I describe  
the isolation of a chicken homolog to the mouse **chromo-  
helicase-DNA binding (CHD)** gene  
which encodes a protein involved in global regulation of transcriptional  
activation on the chromatin level. The avian **CHD** gene exists in  
two genomic copies, one of which (termed **CHD-W**) was located on  
the W chromosome in all non-ratite species investigated. The gene  
displays extreme levels of sequence conservation since chicken **CHD**  
-W and mouse **CHD** are 82.9% and 95.6% identical at the nucleotide  
and amino acid level resp. Mol. sexing can be accomplished in probably  
all non-ratite birds by hybridizing Southern blots with **CHD**  
probes. PCR-based gender identification is also demonstrated. A general  
system for avian sexing should facilitate many studies of behavior,  
evolutionary ecol., genetics, and evolution.



=> d 21 so

L5 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8  
S0 Proceedings of the Royal Society of London, Series B: Biological Sciences  
(1996), 263(1377), 1635-1641  
CODEN: PRLBA4; ISSN: 0962-8452

=> dis his

(FILE 'HOME' ENTERED AT 17:34:50 ON 20 JUN 2005)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 17:35:02 ON 20 JUN 2005

L1 3185 S PKL OR PICKLE  
L2 1 S L1 AND CHROMO AND HELICASE AND DNA BINDING  
L3 9570 S CHD  
L4 29 S L3 AND CHROMO AND HELICASE AND DNA BINDING  
L5 21 DUP REM L4 (8 DUPLICATES REMOVED)

=> s chd3

L6 257 CHD3

=> s l6 and chromos and helicase and dna binding

L7 0 L6 AND CHROMOS AND HELICASE AND DNA BINDING

=> s l6 and chromo and helicase and dna binding

L8 1 L6 AND CHROMO AND HELICASE AND DNA BINDING

=> d ti

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Characterization of the CHD family of proteins

=> d au

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN  
AU Woodage, Trevor; Basrai, Munira A.; Baxevanis, Andreas D.; Hieter, Philip;  
Collins, Francis S.

=> d so

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN  
S0 Proceedings of the National Academy of Sciences of the United States of  
America (1997), 94(21), 11472-11477  
CODEN: PNASA6; ISSN: 0027-8424

=> s chromo and helicase and dna binding and zinc finger

L9 1 CHROMO AND HELICASE AND DNA BINDING AND ZINC FINGER

=> d ti

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN  
TI PKL protein and gene from Arabidopsis and their use for regulating  
developmental identity

=> d ab

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Purified PKL proteins are provided from Arabidopsis thaliana that function  
in regulating developmental identity in host cells. Nucleotide sequences  
encoding functional PKL proteins are also provided. The protein is  
characterized by the presence of a **zinc finger** domain,  
two **chromo** (chromatin organization modifier) domains, a

helicase domain, and a DNA-binding domain.

This is the first demonstration that proteins having such features are able to regulate developmental identity, possibly through regulation of chromatin architecture. PKL appears to also function as a repressor of transcription and as a component of a GA-dependent developmental switch. The invention also provides recombinant vectors including the nucleotide sequences encoding PKL, eukaryotic host cells and transgenic plants that include the introduced nucleotide sequences described herein, and methods of transforming plants utilizing the constructs described herein.

=> d so

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN  
SO PCT Int. Appl., 87 pp.  
CODEN: PIXXD2

=> d pi

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001014519	A2	20010301	WO 2000-US22725	20000818
WO 2001014519	A3	20010830		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 2000067861	A5	20010319	AU 2000-67861	20000818

=> dis his

(FILE 'HOME' ENTERED AT 17:34:50 ON 20 JUN 2005)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 17:35:02 ON 20 JUN 2005

L1 3185 S PKL OR PICKLE  
L2 1 S L1 AND CHROMO AND HELICASE AND DNA BINDING  
L3 9570 S CHD  
L4 29 S L3 AND CHROMO AND HELICASE AND DNA BINDING  
L5 21 DUP REM L4 (8 DUPLICATES REMOVED)  
L6 257 S CHD3  
L7 0 S L6 AND CHROMOS AND HELICASE AND DNA BINDING  
L8 1 S L6 AND CHROMO AND HELICASE AND DNA BINDING  
L9 1 S CHROMO AND HELICASE AND DNA BINDING AND ZINC FINGER

=> s ((ogas j?) or (ogas, j?))/au

L10 40 ((OGAS J?) OR (OGAS, J?))/AU

=> s l10 and (pkl or pickle or chd?)

L11 15 L10 AND (PKL OR PICKLE OR CHD?)

=> dup rem l11

PROCESSING COMPLETED FOR L11

L12 6 DUP REM L11 (9 DUPLICATES REMOVED)

=> d 1-6 ti

L12 ANSWER 1 OF 6 AGRICOLA Compiled and distributed by the National  
Agricultural Library of the Department of Agriculture of the United States  
of America. It contains copyrighted materials. All rights reserved.  
(2005) on STN DUPLICATE 1

- TI **PICKLE** acts throughout the plant to repress expression of embryonic traits and may play a role in gibberellin-dependent responses.
  
- L12 ANSWER 2 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 2
- TI Metabolic profiling of the Arabidopsis **pk1** mutant reveals selective derepression of embryonic traits.
  
- L12 ANSWER 3 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 3
- TI Coordinate repression of regulators of embryonic identity by **PICKLE** during germination in Arabidopsis.
  
- L12 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
- TI **PKL** protein and gene from Arabidopsis and their use for regulating developmental identity
  
- L12 ANSWER 5 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 4
- TI **PICKLE** is a **CHD3** chromatin-remodeling factor that regulates the transition from embryonic to vegetative development in Arabidopsis.
  
- L12 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
- TI Cellular differentiation regulated by gibberellin in the Arabidopsis thaliana **pickle** mutant

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- L12 ANSWER 1 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 1
- AB A seed marks the transition between two developmental states; a plant is an embryo during seed formation, whereas it is a seedling after emergence from the seed. Two factors have been identified in Arabidopsis that play a role in establishment of repression of the embryonic state: **PKL** (**PICKLE**), which codes for a putative **CHD3** chromatin remodeling factor, and gibberellin (GA), a plant growth regulator. Previous observations have also suggested that **PKL** mediates some aspects of GA responsiveness in the adult plant. To investigate possible mechanisms by which **PKL** and GA might act to repress the embryonic state, we further characterized the ability of **PKL** and GA to repress embryonic traits and reexamined the role of **PKL** in mediating GA-dependent responses. We found that **PKL** acts throughout the seedling to repress expression of embryonic traits. Although the ability of **pk1** seedlings to express embryonic traits is strongly induced by inhibiting GA biosynthesis, it is only marginally responsive to abscisic acid and SPY (SPINDLY), factors that have previously been demonstrated to inhibit GA-dependent responses during germination. We also observed that **pk1** plants exhibit the phenotypic hallmarks of a mutation in a positive regulator of a GA response pathway including reduced GA responsiveness and increased synthesis of bioactive GAs. These observations indicate that **PKL** may mediate a subset of GA-dependent responses during shoot development.

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 (2005) on STN DUPLICATE 1  
 SO Plant physiology, 2004 Mar. Vol. 134, no. 3 p. 995-1005  
 ISSN: 0032-0889

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AB Embryos express several unique differentiation characteristics, including  
 the accumulation of a number of metabolites that are generally considered  
 to be unique to seeds. **PICKLE (PKL)** codes for a  
**CHD3**-chromatin remodeling factor that is necessary for repression  
 of embryonic traits in seedlings of *Arabidopsis thaliana* (L.) Heynh. In  
**pk1** mutants, primary roots are capable of expressing many  
 embryonic traits after germination and are referred to as **pickle**  
 roots. In an attempt to examine the breadth of **PKL**-dependent  
 repression of embryo-specific differentiation pathways, we determined the  
 extent to which a variety of embryo-specific compounds accumulate in  
**pickle** roots. We found that **pickle** roots accumulate  
 triacylglycerol with a fatty acid composition that is similar to that  
 found in seeds. The major seed storage proteins are also present in  
**pickle** roots. In addition to these two well-characterized seed  
 storage compounds, we observed that **pickle** roots accumulate  
 phytate, a form of stored phosphate that is preferentially accumulated in  
 seeds. Seeds of members of the Brassicaceae also accumulate a variety of  
 unique secondary metabolites, including sinapate esters and  
 glucosinolates. Surprisingly, the levels of secondary metabolites in  
**pickle** roots were not suggestive of an embryonic differentiation  
 state, but did reveal that a mutation in **PKL** results in  
 substantial changes in root secondary metabolism. Taken together, these  
 data suggest that **PKL** is responsible for regulating some but not  
 all aspects of the embryonic program as it relates to the accumulation of  
 embryo-specific metabolites.

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 (2005) on STN DUPLICATE 2

SO Planta, 2004 July Vol. 219, no. 3 p. 489-499  
 ISSN: 0032-0935

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 of America. It contains copyrighted materials. All rights reserved.  
 (2005) on STN DUPLICATE 3

AB In angiosperms, germination represents an important developmental  
 transition during which embryonic identity is repressed and vegetative  
 identity emerges. **PICKLE (PKL)** encodes a **CHD3**  
 -chromatin-remodeling factor necessary for the repression of expression of  
**LEAFY COTYLEDON1 (LEC1)**, a central regulator of embryogenesis. A candidate  
 gene approach and microarray analysis identified nine additional genes  
 that exhibit **PKL**-dependent repression of expression during  
 germination. Transcripts for all three **LEAFY COTYLEDON** genes, **LEC1**, **LEC2**,  
 and **FUS3**, exhibit **PKL**-dependent repression, and all three  
 transcripts are elevated more than 100-fold in **pk1** primary roots  
 that inappropriately express embryonic traits (**pickle** roots).  
 Three other genes that exhibit **PKL**-dependent regulation have  
 expression patterns correlated with zygotic or somatic embryogenesis, and

one gene encodes a putative Lin-11, Isl-1, MEC-3 (LIM) domain transcriptional regulator that is preferentially expressed in siliques. Genes that exhibit **PKL**-dependent repression during germination are not necessarily regulated by **PKL** at other points in development. Our data suggest that **PKL** selectively regulates a suite of genes during germination to repress embryonic identity. In particular, we propose that **PKL** acts as a master regulator of the LEAFY COTYLEDON genes, and that joint derepression of these genes is likely to contribute substantially to expression of embryonic identity in **pk1** seedlings.

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(2005) on STN DUPLICATE 3  
SO Plant journal, 2003 July Vol. 35, no. 1 p. 33-43  
ISSN: 0960-7412

=> d 4 ag

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L12 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN

AB Purified **PKL** proteins are provided from Arabidopsis thaliana that function in regulating developmental identity in host cells. Nucleotide sequences encoding functional **PKL** proteins are also provided. The protein is characterized by the presence of a zinc finger domain, two chromo (chromatin organization modifier) domains, a helicase domain, and a DNA-binding domain. This is the first demonstration that proteins having such features are able to regulate developmental identity, possibly through regulation of chromatin architecture. **PKL** appears to also function as a repressor of transcription and as a component of a GA-dependent developmental switch. The invention also provides recombinant vectors including the nucleotide sequences encoding **PKL**, eukaryotic host cells and transgenic plants that include the introduced nucleotide sequences described herein, and methods of transforming plants utilizing the constructs described herein.

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L12 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
SO PCT Int. Appl., 87 pp.  
CODEN: PIXXD2

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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001014519	A2	20010301	WO 2000-US22725	20000818
	WO 2001014519	A3	20010830		

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CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
 HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,  
 LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,  
 SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,  
 YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
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 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 AU 2000067861 A5 20010319 AU 2000-67861 20000818

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- L12 ANSWER 5 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 4
- AB The life cycle of angiosperms is punctuated by a dormant phase that separates embryonic and postembryonic development of the sporophyte. In the **pickle** (**pk1**) mutant of *Arabidopsis*, embryonic traits are expressed after germination. The penetrance of the **pk1** phenotype is strongly enhanced by inhibitors of gibberellin biosynthesis. Map-based cloning of the **PKL** locus revealed that it encodes a **CHD3** protein. **CHD3** proteins have been implicated as chromatin-remodeling factors involved in repression of transcription. **PKL** is necessary for repression of **LEC1**, a gene implicated as a critical activator of embryo development. We propose that **PKL** is a component of a gibberellin-modulated developmental switch that functions during germination to prevent reexpression of the embryonic developmental state.

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- SO Proceedings of the National Academy of Sciences of the United States of America, Nov 23, 1999. Vol. 96, No. 24. p. 13839-13844  
 Publisher: Washington, D.C. : National Academy of Sciences,  
 CODEN: PNASA6; ISSN: 0027-8424

=> d 6 ab

- L12 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
- AB The plant growth regulator gibberellin (GA) has a profound effect on shoot development and promotes developmental transitions such as flowering. Little is known about any analogous effect GA might have on root development. In a screen for mutants, *Arabidopsis* plants carrying a mutation designed **pickle** (**pk1**) were isolated in which the primary root meristem retained characteristics of embryonic tissue. Expression of this aberrant differentiation state was suppressed by GA. Root tissue from plants carrying the **pk1** mutation spontaneously regenerated new embryos and plants.

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- L12 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
- SO Science (Washington, D. C.) (1997), 277(5322), 91-94  
 CODEN: SCIEAS; ISSN: 0036-8075

=> s ((somerville c?) or (somerville, c?))/au

- L13 800 ((SOMERVILLE C?) OR (SOMERVILLE, C?))/AU

=> s l13 and (pk1 or pickle or chd?)  
L14 6 L13 AND (PKL OR PICKLE OR CHD?)

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L15 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN  
TI **PKL** protein and gene from Arabidopsis and their use for  
regulating developmental identity

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TI **PICKLE** is a **CHD3** chromatin-remodeling factor that  
regulates the transition from embryonic to vegetative development in  
Arabidopsis.

L15 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2  
TI Cellular differentiation regulated by gibberellin in the Arabidopsis  
thaliana **pickle** mutant